



MODAPS Status for Production and Distribution

Ed Masuoka
MODIS Science Data Support Team

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MODAPS Status

- **MODIS Level 2, Level 2g and Level 3 Daily Ocean and Land products were tested in an N-day production test and PGEs run within the MODIS baseline resources**
- **Ingest portion of SIPS interface works and MODAPS is able to receive and ingest Level 1 products from GSFC DAAC**
- **Integration of PGEs into the at-launch MODAPS system is underway this month in preparation for the 3-day MOSS-2 End-to-End test**



MODAPS Status

- **MODAPS will run at-launch Level 2 and Level 3 Daily products during the MOSS-2 test**
- **MODAPS integration of all at-launch PGEs will complete at the end of May with the exception of 8-day Atmosphere and 16-day Land PGEs**
- **Acceptance testing of the at-launch MODAPS system will be completed in June**



Open Items

- **Mismatches in metadata between our products and ECS ESDTs will prevent archiving of products**
 - SDST will send examples of all products with at-launch metadata to the DAACs and work with DAACs and ECS contractor to fix problems
- **Ocean ESDTs**
 - Schedule for completion needed
- **Operations Agreements with DAACs**
 - Sol Broder (Ops), Mike Jones (MODAPS), Robert Wolfe (Land)
- **Network bandwidth to SCFs**
 - Sol is keeping an eye on this and Mike Moore provide status today
- **SIPS Deliver**



Open Items

- **Level 1A subsetter uses cp and mv**
 - Waiver requested from ESDIS, will miss delivery date if not allowed
- **MEBDOS**
 - Improvements requested by Science Team not done yet
- **Valid Metadata Ranges and V0 WWW interface**
 - Valid ranges for metadata need to be correct to support search and order
- **Browse**
 - Low priority at present
- **Hardware reconfiguration for launch**
 - Need to assemble at-launch system and upgrade 16 processors to 250Mhz
expect 3 days downtime



Status - Level 1

- **MOSS-2 June ETE Test PGEs**
 - PGE01 Level 1A and Geolocation V2.1 4/19
 - PGE02 Level 1B V2.1.5 (launch capable) 5/07
 - PGE03 Cloud Mask, Atmospheric Profiles: 4/30
- **Required update or addition for launch**
 - PGE03 works w/o ancillary data 5/30
 - PGE71 L1A subsetter V2.0 6/09
- **Desired update for launch**
 - PGE02 Level 1B V2.2 (improved physics) 5/30



Status - Atmosphere L 2, L 3

- **Tested?**
 - All Level 2 PGEs were tested in N-day test
- **Integration in V1 MODAPS**
 - PGE04 and PGE06 by 5/7 *
 - PGE05 by 5/14*
 - Daily Atmosphere (PGE 69, 56) by 5/30*
 - Monthly Atmosphere (PGE 57) in June
 - Weekly Atmosphere (PGE 70) in June/July
 - Improved PGE06 in July or August

* **MOSS 2 PGEs**



Status - Ocean L 2, L 3

- **Level 2**
 - PGE09 and PGE10, done*
 - **Level 3**
 - Interim Daily Ocean product PGE20, done*
 - Integrate Ocean L3 products by 5/18**
 - Test production rules for Ocean processing
 - Integrate PGEs from 4/23 delivery
- * **MOSS-2 PGE**
- ** **Will use PGEs from 2/28 delivery in most cases**



Status-Land L2, L3

- **Tested?**
 - All at-launch L2 and L2G PGEs were tested in the MODAPS N-day test or engineering tests
 - All at-launch L3 Daily PGEs were tested in the N-day test
 - PGEs which produced 8-day, 16-day and CMG products have not been tested



Status - Land L2, L3

- **Integration into V1 MODAPS**
 - PGE 7 (Snow) done*
 - PGE 8 (Sea Ice) by 5/7*
 - PGEs 12-15 (Level 2g) by 5/7*
 - PGE 16 (Land Surface Temp) by 5/14*
 - PGE 22 (L3 Aggregation) by 5/14*
 - PGE 33 (L3 Daily LAI/FPAR) by 5/14*
 - PGE 43 (L3 Snow Daily) by 5/14*

*** MOSS 2 PGEs**



Status - Land L3

- **Integration into V1 MODAPS**
 - 8-day PGEs
 - Snow (PGE 45) done
 - Land Surface Reflectance (PGE 21) by 5/31
 - Fire (PGE 29) by 5/31
 - 16-day PGEs
 - 250m VI (PGE 25) by 6/30
 - 1km VI (PGE 23) by 7/15
 - BRDF/Albedo (PGE 35) by 7/15



Q/A and Validation Storage Resources

Online storage

- 100% L1B 1km bands online for 1 day (64GB)
- 10% L2-L4 volume online up to 3 days (104GB)
- L1B 250m and 500m bands needed? (35GB)
- L1B OBC needed? We don't get this

Nearline storage

- Keep L2-L4 products for 12 days ($348\text{GB} \times 12 = 4.2\text{TB}$)



Q/A and Validation Distribution Resource

Network Data Transfer to SCFs

- **Up to 10% of 1x product volume to SCF from MODAPS**
- **UP to 10% of 1x product volume to SCF from DAACs**
- **ftp pull after order or ftp push for “standing orders”**

Distribution via media

- **4 DLT 7000 tape drives**
- **Top speed w/o compression is 5MB/sec per drive**



Q/A and Validation Resources

Software

IDL and ENVI

PCI EASI/PACE

ESRI's ARC/INFO

LDOPE's Q/A database*

Workstations

Shortage of seats,

Plan to add PCs

running Linux

Manpower

Ocean Q/A

Atmosphere Q/A

* Contact David Roy or Robert Wolfe, access via WWW



Estimating Production

- Tested PGEs fall within MODIS resource baseline so for these a 50% production level should be achievable
- The resources required to make Level 3 weekly, 16 day and monthly products have not been measured during production, estimate for these a 25% - 50% production level
- Current system is running with half the disk space, half the processors all at 195Mhz and data transfers both internal and external across FDDI
- Final benchmarks from testing after MOSS-2



System and Software Updates

- **Operating System patches will be tested on either the development system, modular, or the acceptance test system, mo1, before being rolled into the production system**
- **Updates to existing PGEs will take from 1 to 10 or more working days to get into production depending on the nature and complexity of the change**
- **New PGEs can take several months to bring into the system if new loaders are required and if their ESDTs are not registered in the ECS system.**



System Update Plan

- **V2 MODAPS system will be delivered at the end of L+6 months**
- **It has as design goals:**
 - Faster disk I/O
 - Faster loaders
 - A more robust scheduler
 - Better operator support tools
 - Capability to fill in holes in processing
- **A decision with regard to hardware architecture will also be made for 2000 based on results of prototyping**